

# Public Safety Interoperable Communications

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## AIRS Usage



# ***Instructor introduction***

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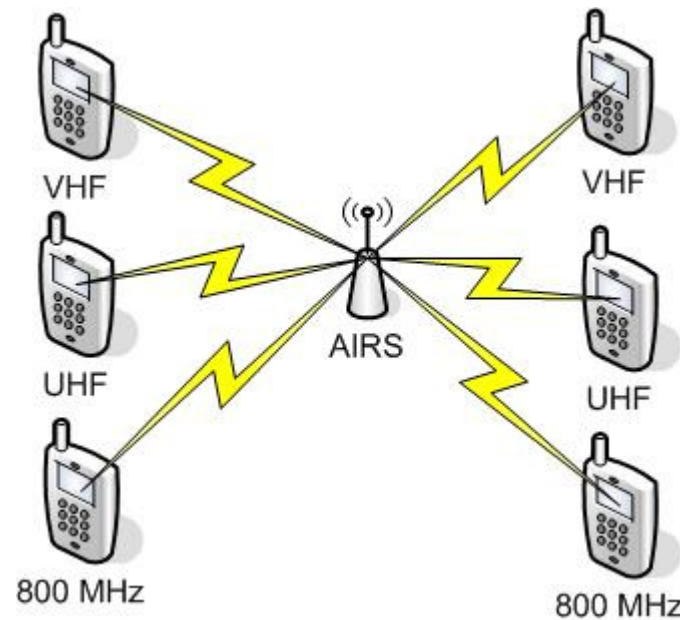


# Performance Objectives

Upon completion of this course of instruction, students using notes, handouts and other support materials as references, within the allotted time, will:

- **Identify when AIRS is to be used.**
- **Demonstrate how to select the right channel.**
- **Demonstrate understanding of plain English requirement.**
- **Demonstrate understanding of requirement to use agency affiliation and title.**
- **Demonstrate knowledge of system's known limitations.**
- **Demonstrate knowledge of the regional monitoring and dispatching capabilities.**
- **Identify who to notify in their agency if there is a problem.**

AIRS is a suite of full-time, cross-banded (i.e. VHF, UHF, and 800 MHz) mutual aid channels designated specifically for multi-agency use across the State of Arizona.





## Definitions (1/4)

**AIRS - Arizona Interagency Radio System, formerly referred to as the Interagency Radio System (IARS) or as the Arizona Emergency Radio System (AERS)**

**AIRSAZ - Arizona Interagency Radio System - Arizona**

**ARRC - The 800 MHz National Public Safety Planning Advisory Committee (NPSPAC) Arizona Regional Review Committee**

**CAD - Computer Aided Dispatch**

**COML - Communications Unit Leader**

**CTCSS - Continuous Tone-coded Squelch System, also known as “PL”, a sub-audible tone used in radio systems to control radio access**

**DPS - Department of Public Safety**

**EMS - Emergency Medical Services**



## Definitions (2/4)

**FCC - Federal Communications Commission**

**Freq - Frequency**

**IC - Incident Command**

**ICS - Incident Command System**

**ID - Identification**

**MOU - Memorandum of Understanding**

**NCC - National Coordination Committee**

**NGO - Non-governmental Organization**

**NIMS - National Incident Management System**

**NOC - Arizona Department of Public Safety, Wireless Systems  
Bureau, Network Operations Center**



## Definitions (3/4)

**NPSTC - National Public Safety Telecommunications Council**

**PL - Private Line**

**POC - Point of Contact**

**PSAP - Public Safety Answering Point**

**PSCC - The Public Safety Communications Advisory Commission provides recommendations to the PSIC Office on the development of standards based systems providing interoperability for public safety agencies' communications statewide**

**PSIC Office - Public Safety Interoperable Communications Office in the Arizona Government Information Technology Agency responsible for advancing interoperable communication in Arizona and supporting the PSCC and the SIEC in the performance of their missions.**



## Definitions (4/4)

**SIEC - The Statewide Interoperability Executive Committee is the sub-committee of the PSCC responsible for technical and operational recommendations to the PSCC. The SIEC manages the 700 MHz, UHF and VHF spectrums, and has operational oversight of AIRS.**

**SOP - Standard Operating Procedure**

**Voter - A device that selects the best quality audio from a number of received signals and routes the selected “voted” audio to a dispatcher.**

**WSB - Arizona Department of Public Safety, Wireless Systems Bureau which has engineering and maintenance responsibility for AIRS.**






# When to use AIRS

AIRS may be used for situations that require interoperable communications to coordinate multiple public safety/public service entities and/or activities across two or more separate radio systems.

Examples include, but are not limited to:

- Search and rescue operations.
- Wildland firefighting.
- Pursuits that cross jurisdictional lines and involve many agencies, especially when they out run their radio system. 
- Planned events involving multiple agencies, such as marathons or bicycle races.
- Multi-agency drills and exercises.



# AIRS Prioritization (1/2)

AIRS Usage is prioritized based on:

1. Disasters, large scale incidents, or extreme emergencies requiring mutual aid or interagency communications.
2. Incidents where imminent danger exists to life or property.
3. Other incidents requiring the response of multiple agencies.
4. Pre-planned events requiring mutual aid or interagency communications.
5. Incidents involving a single agency where supplemental communications are needed for short term agency use.
6. Drills, tests and exercises.

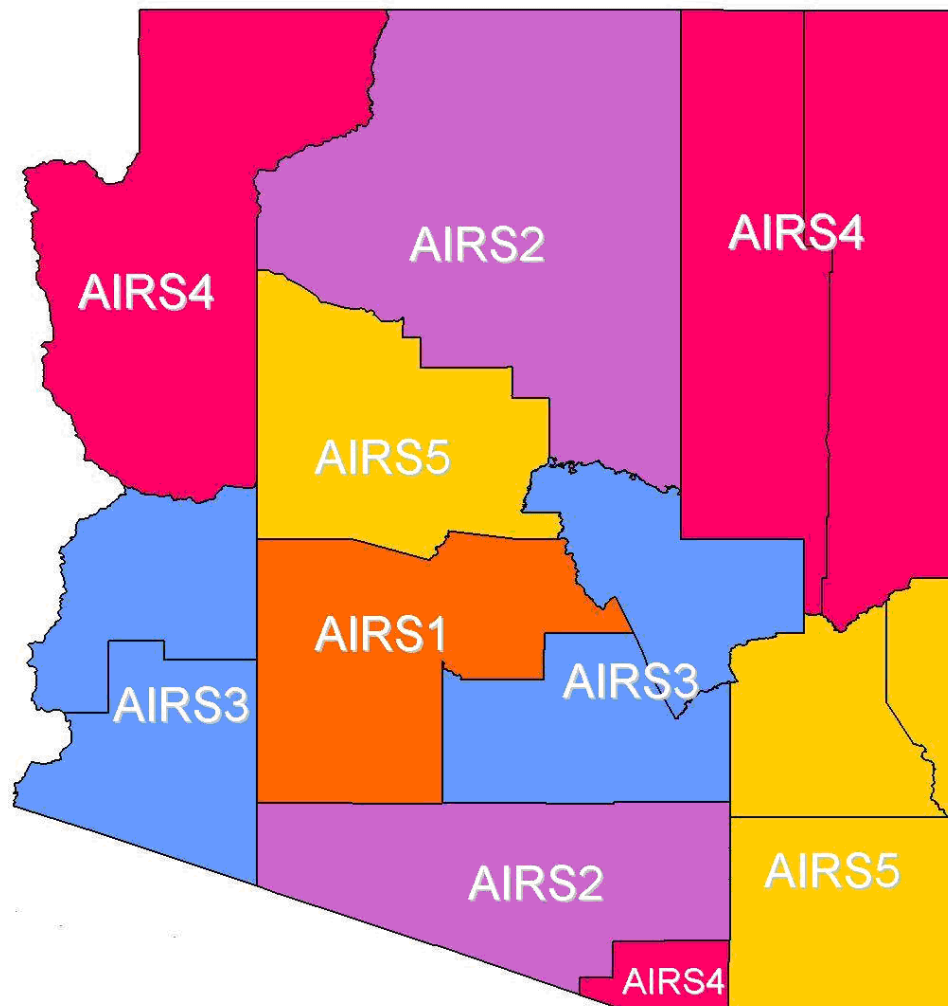


## AIRS Prioritization (2/2)

In the event of multiple simultaneous incidents within the same priority level, AIRS channels should be allocated with the following priorities in mind:

1. When at all possible, agencies already using an interoperable asset during an event should not be redirected to another resource.
2. Agencies with single/limited interoperable options have priority use of those options over agencies with multiple interoperable options.
3. Incidents with the greatest level of exigency (e.g., greater threat to life or property, more immediate need) have priority over less exigent incidents.

# AIRS Channel Selection



*Assignments are drawn on county lines, but coverage may extend beyond those artificial limits.*



# Requirements for using AIRS

**1. Plain Language**

**2. Unit Identification**



# Plain Language

All interoperable communications during multi-agency, multi-discipline incidents will be in plain language. Avoid using radio codes, acronyms, and abbreviations as they may cause confusion between agencies. Ensure that all verbal requests for assistance or backup specify the reason for the request.



# Unit Identification

Announce your home agency prior to announcing your unit identifier during interoperable communication situations.

- "MCSO T544"
- "SouthWest Ambulance 172"
- "Tolleson Engine 191"
- "Southwest Gas ..."
- "Red Cross ..."
- "Salvation Army..."



# AIRS System Limitations

**1. Coverage**

**2. Non-Voted/Non-monitored Towers**

**3. Encryption**

**4. Monitoring**

**4. Communication**





# Coverage Limitations

**Regional channel assignments do not guarantee coverage throughout region.  
See county maps in SOP.**

**County maps are based on coverage estimates from tower sites.**

**Actual coverage areas overlap in some areas and may cause interference if both  
channels are in use.**



# Non-Voted/Non-Monitored Towers

- Some AIRS towers are not voted back to a communications center.
- Others may be voted back to a communications center that is not monitoring.
- These sites can still be used, but users should be aware that they are single-site or not monitored.
- See AIRS SOP Appendix.

- AIRS channels are NOT encrypted.
- AIRS channels are rebroadcast IN THE CLEAR across three bands.
- Users must consider this and avoid using AIRS for sensitive information.



# Monitoring

- AIRS channels are NOT monitored in several counties, including Maricopa.
- The PSCC is working with regional partners to implement monitoring in these areas.

- AIRS makes use of conventional repeaters.
- Monitoring communication centers can communicate with users throughout the regional coverage area.
- User to user communication is possible only between users having coverage from a common tower within the region.



# Regional Monitoring & Dispatch

Refer to the AIRS Standard Operating Procedures

## Questions?